Lake Erie Harmful Algal Bloom Bulletin

01 August, 2019, Bulletin 10

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin of Lake Erie. Sentinel imagery from 7/30 shows the bloom extending from Maumee Bay north along the Michigan coast to Pointe Mouillee, east along the Ohio coast to the Portage River, and offshore up to 8 miles east of West Sister Island. Observed winds yesterday (7/31) promoted mixing, reducing surface concentrations and scums. Measured toxin concentrations have increased since last week and exceed the recreational threshold where the bloom is most dense (appearing green from a boat). *Keep pets and yourself out of the water in areas where scum is forming*. The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are present in Lake Erie.

Forecasts

Winds (3-11 kn) forecast today and tomorrow (8/1-2) will promote further mixing of surface *Microcystis*. Winds (3-6 kn) forecast this weekend (8/3-4) may promote scum formation and eastward transport of surface *Microcystis* concentrations. –Davis, Keeney

Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: *http://publicapps.odh.ohio.gov/beachguardpublic/*
Ohio EPA's site on harmful algal blooms: *http://epa.ohio.gov/HAB-Algae*
NOAA's GLERL provides additional HAB data here: *http://www.glerl.noaa.gov/res/HABs_and_Hypoxia*

The images below are "GeoPDF". Please visit https://go.usa.gov/xReTC for instructions on viewing longitude and latitude.

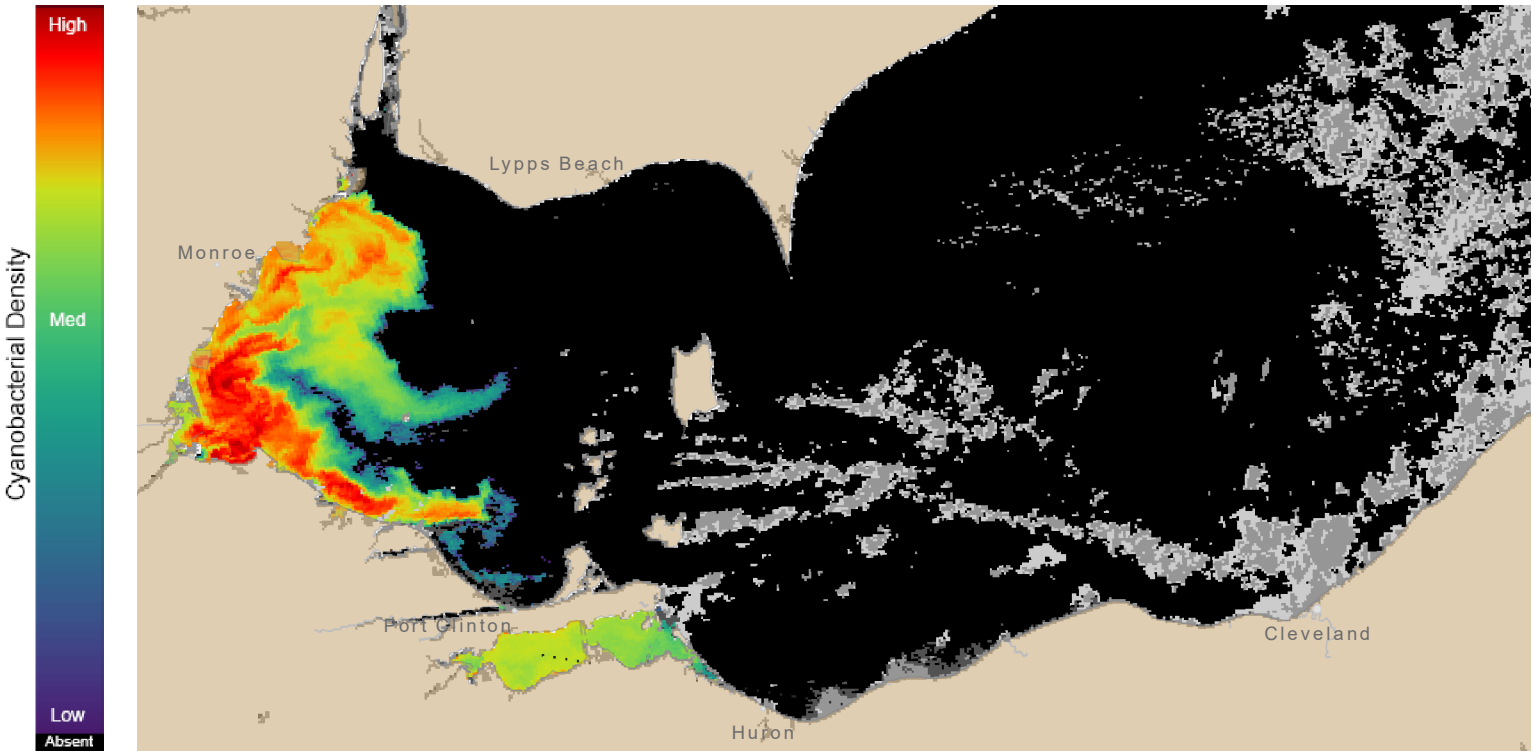


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 30 July, 2019 at 11:31 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/ml

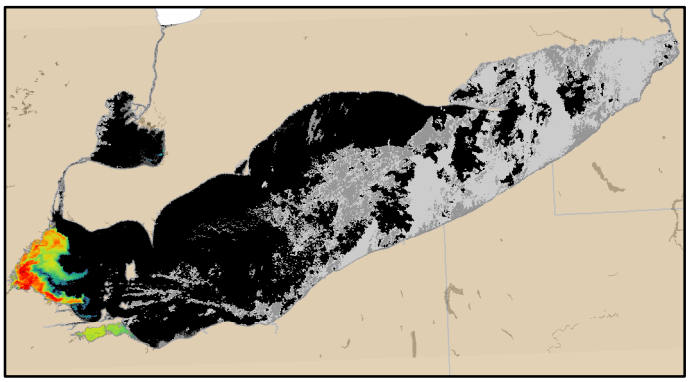
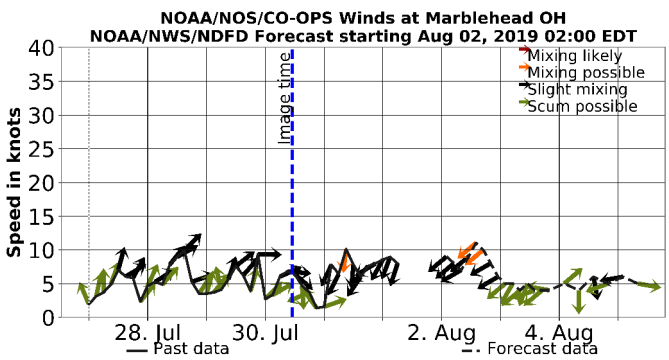


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 30 July, 2019 at 11:31.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

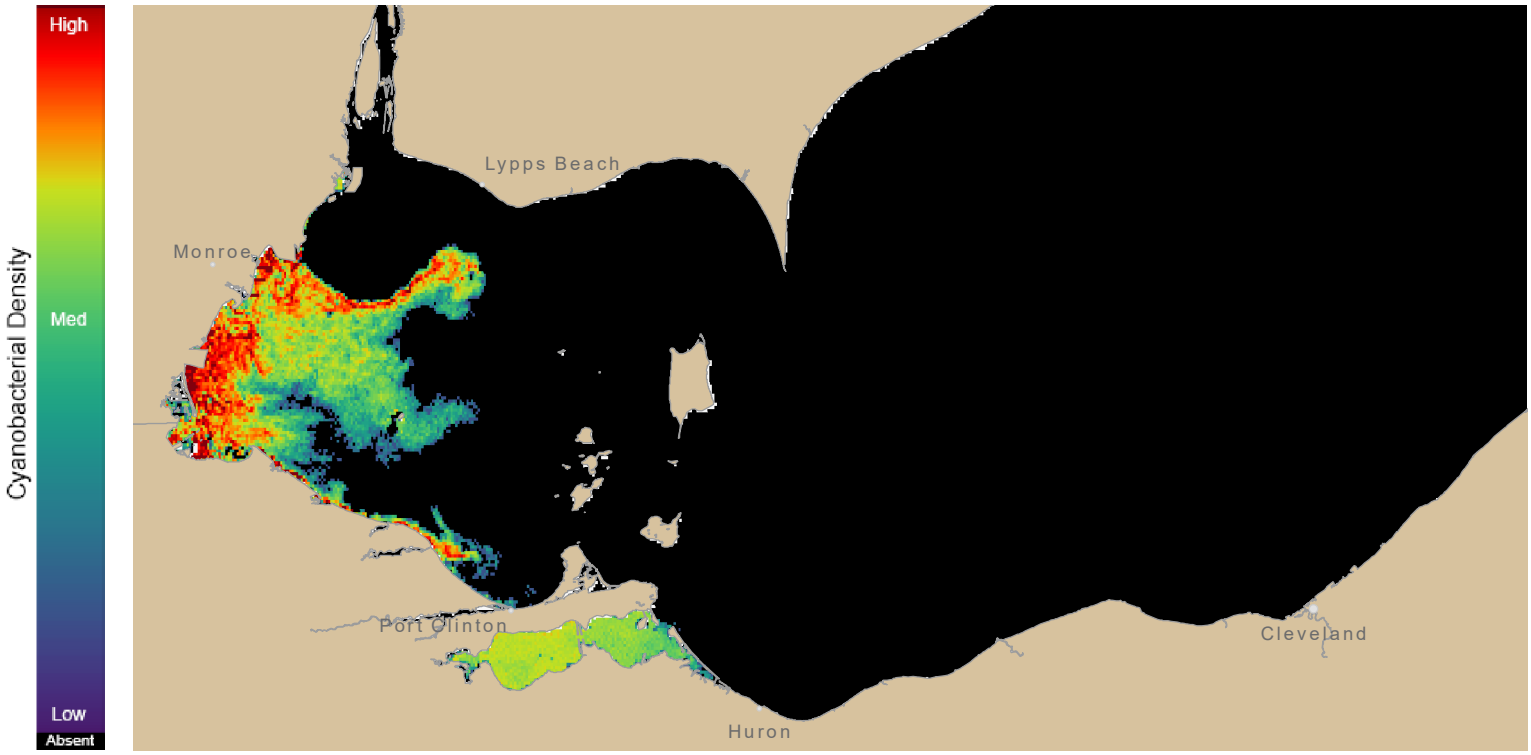


Figure 3. Nowcast position of bloom for 01 August, 2019 using LEOFS modelled currents to move the bloom from the 30 July, 2019 image.

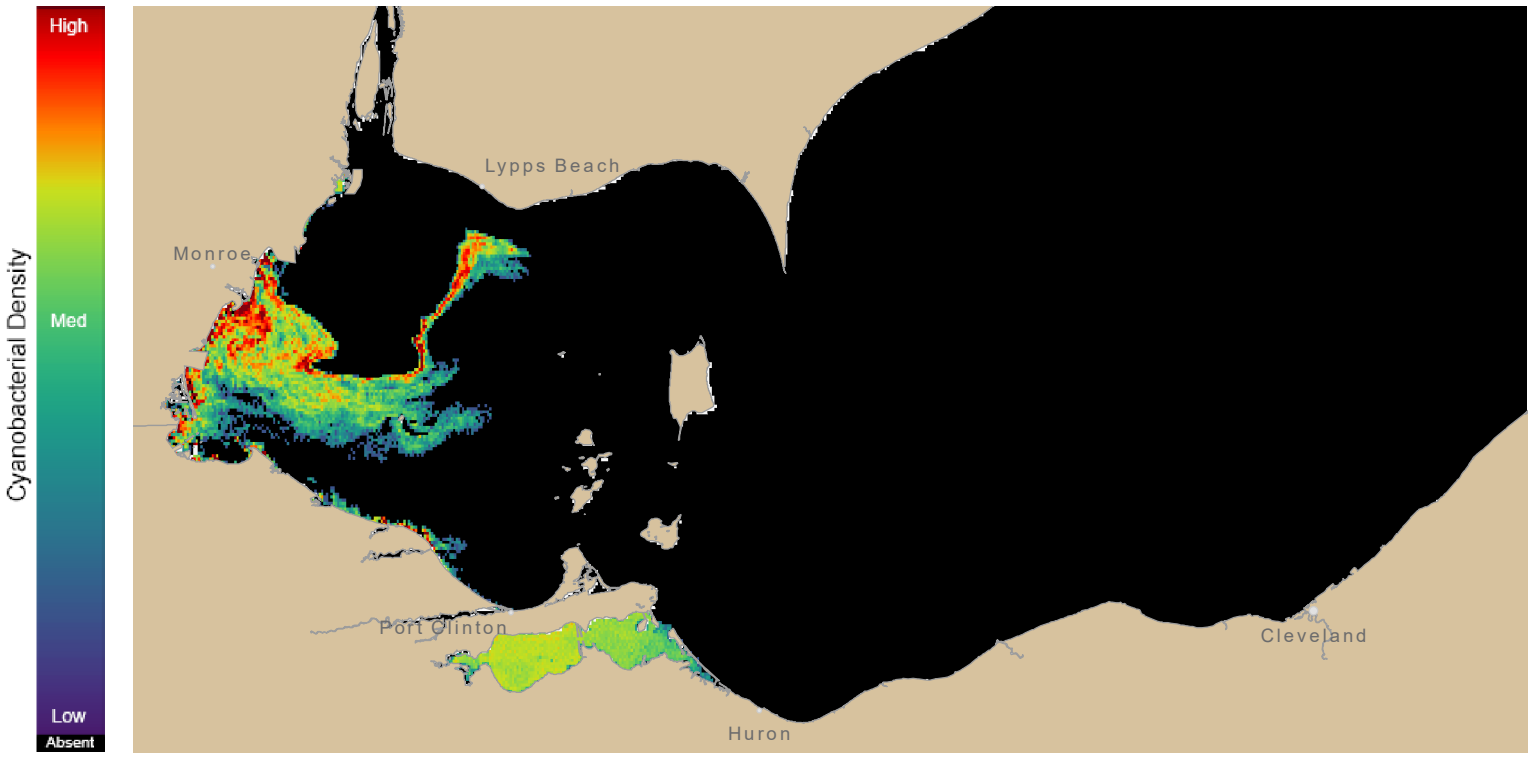
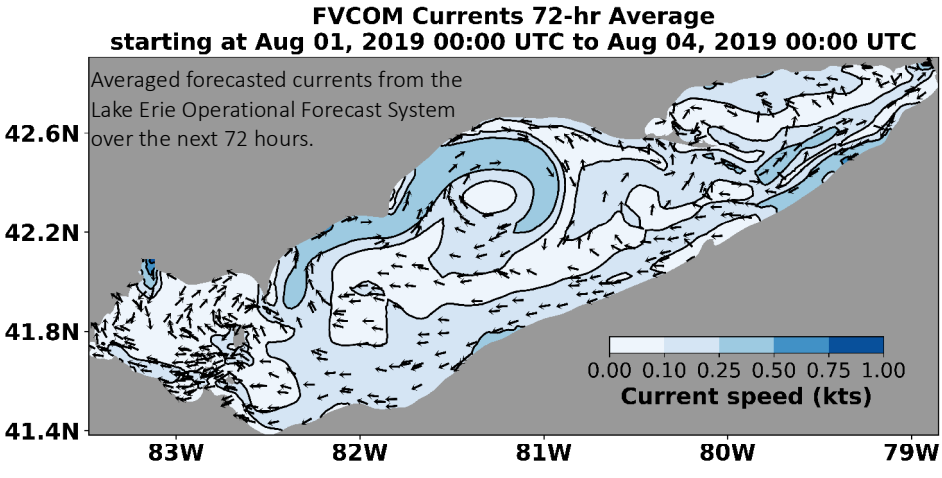


Figure 4. Forecast position of bloom for 04 August, 2019 using LEOFS modelled currents to move the bloom from the 30 July, 2019 image.



For more information and to subscribe, please visit the NOAA HAB Forecast page: https://tidesandcurrents.noaa.gov/hab/lakeerie.html